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# United States Department of the Interior

BUREAU OF RECLAMATION  
Commissioner's Office  
PO Box 25007  
Denver Federal Center  
Denver, Colorado 80225-0007



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## MEMORANDUM

To: Regional Director, PN, MP, LC, UC, GP  
Attention: PN-1000, MP-100, LC-1000, UC-100, GP-1000

From: Margaret W. Sibley  
Director, Office of Policy

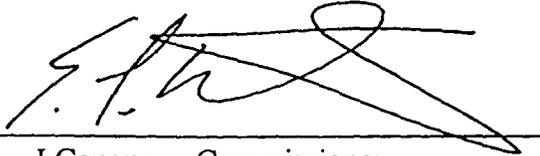
Subject: Directives and Standards for Periodic Review of Irrigation Ability-to-Pay Analyses

The Reclamation policy memorandum, dated March 25, 1994, requires that all new contracts, and all existing contracts when they are amended, include a provision for periodic re-examination of irrigation ability-to-pay and for resulting adjustments in water service and repayment rates. The Commissioner issued a supplementary memorandum dated July 7, 1999, which reaffirmed the basic policy, but provided some modifications and clarifications on certain issues. The attached directives and standards provide additional information on the timing and level of technical detail required for the ability-to-pay reviews.

Determination of ability-to-pay and subsequent negotiations with the contracting entity can be a lengthy and intensive process for Reclamation economists and contract specialists. There is a need to balance the required staff effort for a thorough re-examination of ability-to-pay with the expected benefit, which is a more current and equitable annual repayment rate. The directives and standards establish thresholds based on the length of the repayment term and the present value of the repayment stream below which the level of review can be reduced. However, all contracts will continue to include a provision for periodic reviews.

These directives refer to the terms "payment capacity" and "ability-to-pay" with specific meaning. Payment capacity is defined as the residual net farm income of irrigators available to pay both federally and non-federally assessed water costs, after deduction for on-farm production and investment expenses. Payment capacity is a farm-level analysis and is usually determined in Reclamation by preparation of detailed farm budgets or enterprise studies. In contrast, ability-to-pay is defined as the payment capacity of irrigators expanded to the applicable project or service area, less irrigation-related water distribution, operations and debt-servicing costs of the contracting entity. Ability-to-pay is a district-level analysis, and is the increment of district revenues over expenses available for a contract obligation with the United States.

The directives and standards will be incorporated into the Reclamation Manual at the time a comprehensive policy on ability-to-pay is finalized for inclusion. If there are questions on these Directives and Standards, you may contact Alonzo D. Knapp, Manager, Reclamation Law, Contracts and Repayment Office (D-5200) at 303-445-2889 or Robert Hamilton, Manager, Economics Group in the Technical Service Center (D-8270) at 303-445-2724.



I Concur - Commissioner

AUG 20 1999

Date

Attachments

## Directives and Standards

### 5-year Re-examination of Irrigation Ability-to-Pay

1. Number of 5-year reviews. The 5-year re-examination of ability-to-pay shall not be conducted in cases where less than 5 years would remain in the repayment term of the contract. For example, a contract which would "pay out" in 8 years at the initial annual repayment rate would not include a provision for re-examination of ability-to-pay; that is because at the end of year 5 when a review would normally be scheduled, only 3 years remain in the repayment term. Similarly, a contract with a clause for re-examination which has been re-examined at year 5 and year 10, and would "pay out" in year 17, would not be re-examined at year 15. The 5-year re-examination requirement can be avoided altogether in contracts with terms of 9 or less years.
2. Threshold for Conducting Reviews. The present value of the existing (remaining) repayment stream should be computed based on the current yield of U.S. Treasury securities with a comparable term. If the present value is less than \$100,000, then no reviews, expeditious or in-depth, are required. The \$100,000 threshold is based on an approximation of maximum potential staff costs to perform and implement the studies.
3. Calculation of expeditious estimate of ability-to-pay
  - a. If a review is required in accordance with 1 and 2, certain key indicators of payment capacity and ability-to-pay will be considered and expeditious estimates of both will be developed prior to initiation of an in-depth re-examination. An in-depth re-examination is generally considered to be one which is consistent with all Reclamation policies, directives and technical guidelines.
  - b. Key indicators for payment capacity are cropping patterns, farm prices received, crop yields, and U.S. Department of Agriculture's (USDA) *Index for Prices Paid*. The key indicator for ability-to-pay (other than the estimate of payment capacity) is the current assessment that the contracting entity charges irrigators.
  - c. In terms of payment capacity, the current cropping pattern, the average of the most recent 5 years of prices received, and the average of the most recent 5 years of yields should be compiled to generate a current estimate of representative per acre or per acre-foot gross farm income. If livestock contributed significantly to gross farm income in the previous payment capacity analysis, new 5-year average livestock prices should be compiled and applied to the previous livestock output. After gross farm income is estimated, the sum of production and investment expenses and the labor, equity, and management allowances from the previous payment capacity analysis should be indexed from the last year represented in the previous analysis to the current year, using USDA's *Index of Prices Paid*. This per acre or per acre-foot estimate of current expenses should be deducted to arrive at the estimate of payment capacity.

d. Once the estimate of payment capacity is developed, the current irrigation assessment charged by the contracting entity is deducted to arrive at the current per-acre or per acre-foot estimate of ability-to-pay. Normally, this estimate is incremental to the original ability-to-pay because current assessments reflect collections for contract repayment. Since district expenses and resulting assessments generally trend upward, the current year's assessment is usually acceptable, although if assessments have fluctuated up and down, a 5-year average would be appropriate for use. Data on assessments for the expeditious ability-to-pay will usually be readily available from the contracting entity. Validation of the assessments by means of a thorough examination of financial records, which is required for an in-depth analysis, is not required for the expeditious estimate. The incremental ability-to-pay estimate should be expanded to the project or service area based on the relevant acres or acre-feet.

4. Decision rule for expeditious estimate of ability-to-pay. The expeditious estimate of incremental ability-to-pay detailed above should be used to develop a repayment stream for the remaining length of the contract. The repayment stream should reflect adjustments from the current ability-to-pay estimate in future years if significant financial changes are expected to occur. The present value of that stream should be compared to the present value of the existing repayment stream. If the difference in present value between the two streams is \$100,000 or more, plus or minus, then an in-depth re-examination of ability-to-pay should be conducted. Otherwise, no further analysis is undertaken and annual payments are not adjusted. The expeditious estimate of ability-to-pay is used only to determine if more detailed analysis is required; it will not be used to establish actual repayment terms. A simplified example is appended.

5. Need for periodic in-depth re-examination of ability-to-pay. If an in-depth re-examination of ability-to-pay is not necessary as a result of number 4, an in-depth re-examination must be conducted at the conclusion of the next 5-year interval. In this way, in-depth re-examinations occur at no less than 10-year intervals. This directive is necessary due to the sensitivity of ability-to-pay to small changes in the data, as well as the imprecision of the expeditious estimating process. However, in cases where there is no existing ability-to-pay or ability-to-pay is near zero, the in-depth review can be curtailed once sufficient analysis has been performed to conclude that positive ability-to-pay will not result from additional analysis. Similarly, the in-depth review can be curtailed if it is clear that additional analysis will not achieve the \$100,000 threshold noted in 6 below. These conclusions must be documented.

6. Decision rule for in-depth estimate of ability-to-pay. When an in-depth re-examination of ability-to-pay is conducted, the resulting revised repayment stream for the remaining term of the contract should be compared to the present value of the existing repayment stream. If the difference in present value between the two streams is \$100,000 or more, plus or minus, then the contract repayment stream should be adjusted in accordance with the revised ability-to-pay. Otherwise, no further action is taken and annual payments are not adjusted.

7. Repayment floor. In certain cases, it will be desirable to establish in the contract a repayment floor, or lowest annual payment, below which no periodic adjustments will be made. For example, if no power assistance is available, a mechanism should be in place to assure repayment within the statutory repayment period. In other cases, the contracting entity may be willing to pay some base amount without regard to Reclamation's ability-to-pay analysis.

8. Reclamation responsibilities. The Regional Directors have the responsibility to arrange for the payment capacity and ability-to-pay re-examinations. Payment capacity and ability-to-pay analyses (either expeditious or in-depth) shall be reviewed and approved by the Director, Office of Policy in consultation with the Economics Group, Technical Service Center. Exceptions to these directives can be granted by the Director, Office of Policy.

9. Need for consultation. Reclamation staff shall closely consult with the contracting entity in the ability-to-pay re-examination process, in both the expeditious and in-depth analyses.

## Simplified Example of Expeditious Review

### Baseline Data:

loan type: .....	Safety of Dams (SOD)
maximum authorized repayment term: .....	50 years
power assistance assumption: .....	not applicable
initial payment capacity: .....	\$10/acre
initial district water assessment: .....	\$8/acre
initial district ability-to-pay (difference): .....	\$2/acre
irrigated acres: .....	100,000
initial annual payment (acres x ability-to-pay): .....	\$200,000
initial repayment obligation: .....	\$3,400,000
initial repayment term (obligation ÷ payment): .....	17 years
remaining loan balance after 5 years: .....	\$2,400,000
interest rate of 12 year U.S. securities: .....	5.25%
present value of 12 remaining payments: .....	\$1,748,000

**Case A:** Assumes that the expeditious estimate of ability-to-pay conducted after year 5 increases:

### **Data:**

estimate of payment capacity: .....	\$13/acre
current district assessment <sup>a</sup> : .....	\$12/acre
estimate of <u>incremental</u> ability-to-pay (difference) <sup>a</sup> : .....	\$1/acre
<u>incremental</u> annual payment (acres x ability-to-pay) <sup>a</sup> : .....	\$100,000
initial annual payment (from baseline data): .....	\$200,000
revised annual payment (incremental payment + initial payment): .....	\$300,000
loan balance after 5 year (from baseline data): .....	\$2,400,000
revised remaining repayment term (balance ÷ revised payment): .....	8 years
interest rate of 8 year U.S. securities: .....	5.2 %
present value of 8 remaining payments: .....	\$1,923,000
present value of existing repayment (from baseline data): .....	\$1,748,000
difference (positive): .....	\$175,000

<sup>a</sup>In this example, it is assumed that the current district assessment includes collections necessary to make the initial \$200,000 district payment; therefore, any computed ability-to-pay or payment is incremental to the initial estimates.

**Conclusion for Case A:** The absolute change in present value (\$175,000) exceeds \$100,000; therefore, a detailed ability-to-pay analysis should be conducted.

**Case B:** Assumes that the expeditious estimate of ability-to-pay conducted after year 5 decreases:

**Data:**

estimate of payment capacity: .....	\$11/acre
current district assessment <sup>a</sup> : .....	\$12.50/acre
estimate of <u>incremental</u> ability-to-pay (difference) <sup>a</sup> : .....	(\$1.50)/acre
<u>incremental</u> annual payment (acres x ability-to-pay) (negative) <sup>a</sup> : .....	(\$150,000)
initial annual payment (from baseline data): .....	\$200,000
calculated revised annual payment (incremental payment + initial payment): ...	\$50,000
loan balance after year 5 (from baseline data): .....	\$2,400,000
calculated remaining repayment term (balance ÷ revised payment): .....	48 years
authorized remaining repayment term (50 years - 5 years): .....	45 years
adjusted revised annual payment (balance ÷ authorized years) <sup>b</sup> : .....	\$53,333
interest rate of 30-plus year U.S. marketable securities: .....	5.4%
present value of 45 remaining payments: .....	\$895,000
present value of existing repayment (from baseline data): .....	\$1,748,000
difference (negative): .....	(\$853,000)

<sup>a</sup>In this example, it is assumed that the current district assessment includes collections necessary to make the initial \$200,000 district payment; therefore, any computed ability-to-pay or payment is incremental to the initial estimates.

<sup>b</sup>In this example, no power assistance is available; if power assistance had been available, the contracting entities estimated annual payment would have been equal to ability-to-pay (\$50,000) and they would have repaid \$2,200,000 of the \$2,400,000 remaining repayment obligation over 45 years subject to periodic 5-year reviews. Power assistance would be estimated at \$200,000. Without power assistance, the entire repayment obligation must be paid by the contracting entity within the statutory term of 50 years, even if payments are greater than ability-to-pay.

**Conclusion for Case B:** The absolute change in present value (\$853,000) exceeds \$100,000, therefore, a detailed ability-to-pay analysis should be conducted.